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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,248	06/20/2005	Mikio Miyake	MICS124074	2899
26389	7590	12/13/2007		
CHRISTENSEN, O'CONNOR, JOHNSON, KINDNESS, PLLC			EXAMINER	
1420 FIFTH AVENUE			KIANNI, KAVEH C	
SUITE 2800			ART UNIT	PAPER NUMBER
SEATTLE, WA 98101-2347			2883	
			MAIL DATE	DELIVERY MODE
			12/13/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/517,248

Applicant(s)

MIYAKE ET AL.

Examiner

Kianni C. Kaveh

Art Unit

2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 20-43 is/are pending in the application.
- 4a) Of the above claim(s) 33-43 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 26-32 is/are allowed.
- 6) ☒ Claim(s) 1 and 20-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

- In response to applicant's arguments filed on 8/29/07, the examiner vacated the first non-final rejection, 3/29/07, and thus this action is made non-final.

Allowable Subject Matter

Claims 26-32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 26 is allowable because the prior art of record, taken alone or in combination, fails to disclose or render obvious a base section of the end having the male convex shape is continued to an end edge of an annular step which is formed to have a diameter reduced in a radial direction of the ferrule, and a base section of the end having the female concave shape is continued to an end edge of an annular step which is formed to have a diameter reduced in a radial direction at an open end of the ferrule in combination with the rest of the limitations of the base claim. Claims 27-32 are allowed in virtue of dependency.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

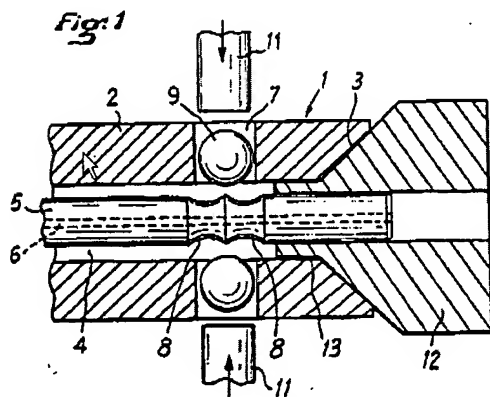
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 and 20-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cartier (US 4767177).

Cartier teaches a pair of ferrule used for an optical fiber connector (shown in at least fig.1),



the pair of ferrules 1 comprising: a first ferrule 1 which has an optical fiber-inserting hole; and a second ferrule 12 which has an optical fiber-inserting hole and which is arranged oppositely to the first ferrule so that the optical fiber-inserting hole of the second ferrule is positioned coaxially with respect to the optical

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fiber-inserting hole of the first ferrule (shown in at least fig. 1, see item 1 at female and 12 as a matching ferrule),

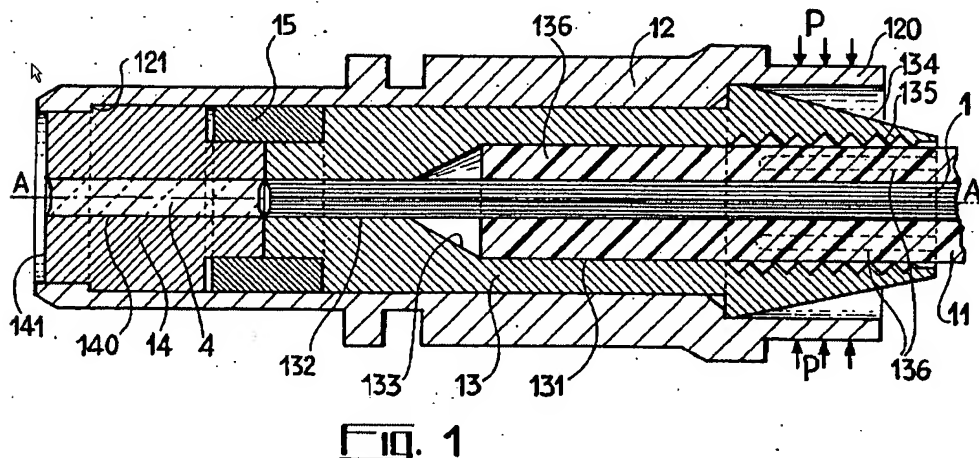
wherein: an end of the first ferrule, which is opposed to the second ferrule, has a convex shape, and an end of the second ferrule, which is opposed to the first ferrule, has a female concave shape provided with a fitting section for receiving the end having the convex shape while making tight contact therewith (see fig. 1, specifically col. 3, line 1-col. 4 line 40); that wherein each of the convex/concave shape has one of a conical/spheroidal/hemispherical shape (see fig. 1).; Cartier further teaches wherein each of the first and second ferrules is made of metal (see col. 1); wherein each of the first and second ferrules is made of stainless steel; wherein each of the first and second ferrules is produced by an electroforming method (not given patentable weight for process used to obtain the ferrule).

However, Cartier does not specifically state that the above convex shape part of the connector is male and has an angle of depression of 20.degree. to 80.degree and that the material of the ferrule is nickel alloy. It is obvious/well-known to those of ordinary skill in the art when the invention was made that matching shapes is being inserted into the a segment counterpart is a male and that it would have been obvious to a person of ordinary skill in the art when the invention was made as a matter of desired design to have the angle range such as 20 degree to 80 degree and that the metallic ferrule as matter of design choice be nickel and/or steel alloy since such shape provide longer duration without reducing in thermal and mechanical property in high

temperature and humidity circumstances and being able to efficiently align male and female ferrules (see col. 1);

Claims 1 and 20-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bouygues et al. (US 4139260).

Bouygues teaches a pair of ferrule used for an optical fiber connector (shown in at least fig.1, see at least abstract and col. 2, lines 43-64);



the pair of ferrules comprising: a first ferrule which has an optical fiber-inserting hole; and a second ferrule which has an optical fiber-inserting hole and which is arranged opposingly to the first ferrule so that the optical fiber-inserting hole of the second ferrule is positioned coaxially with respect to the optical fiber-inserting hole of the first ferrule (see at least abstract and col. 1, lines 43-64), wherein: an end of the first ferrule, which is opposed to the second ferrule, has a convex shape, and an end of the second ferrule, which is opposed to the first ferrule, has a female concave shape provided with a fitting section for receiving the end having the convex shape while making tight contact therewith (shown in at least fig. 1, items 13 and conical item 133); that wherein

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each of the convex/concave shape has one of a conical/spheroidal/hemispherical shape (see fig. 1); wherein each of the first and second ferrules is produced by an electroforming method (not given patentable weight for process used to obtain the ferrule).

However, Bouygues does not specifically state that the above convex shape part of the connector is male and has an angle of depression of 20.degree. to 80.degree. and that the material of the ferrule is metal/stainless-steel/nickel -alloy. It is obvious/well-known to those of ordinary skill in the art when the invention was made that matching shapes is being inserted into the a segment counterpart is a male and that it would have been obvious to a person of ordinary skill in the art when the invention was made as a matter of desired design to have the angle range such as 20 degree to 80 degree and that the ferrule material to be extremely conventional metals such as nickel and/or steel alloy since such shape provide longer duration without reducing in thermal and mechanical property in high temperature and humidity circumstances and being able to efficiently plugged together (see col. 1).

Response to Arguments and Amendment

Applicant's argument filed on 8/29/07 have been fully considered and thus the examiner has used previously cited prior art in order to overcome the applicant's objections and thus for now the applicant's arguments are moot.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kianni C. Kaveh whose telephone number is 571-272-2417. The examiner can normally be reached on 9:30-19:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

K. Cyrus Kianni
Primary Patent Examiner
Group Art Unit 2883

December 10, 2007



K. CYRUS KIANNI
PRIMARY PATENT EXAMINER